

"APPROVED FOR RELEASE: 08/31/2001

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NO REF SOV: 009

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$\text{CuSiO}_4/\beta$  system was investigated at temperatures up to 1000°C by means of X-ray analysis and crystal optics. Microscope investigations of the samples disclosed that the system contains a homogeneous band based on  $\text{Ca}_2\text{SiO}_4$  corresponding to 100-60 wt.% copper. The band is in the form of a

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SUBMITTED: 13 Oct 63

PAGE: 01

TAB BODY: TC CP

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CIA-RDP86-00513R001756330006-0"

BONDAR', I.A.; TENISHEVA, T.F.; SHEPELEV, Yu.F.; TOROPOV, N.E.

New rare-earth diorthosilicate K<sub>3</sub>Eu (S<sub>12</sub>O<sub>7</sub>). Dokl. AN SSSR 160  
no.5:1069~1071 F '65. (MIRA 18:2)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.
2. Chlen-korrespondent AN SSSR (for Toropov).

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ACC NR: AM6004712

Monograph

UR/

Toropov, Nikita Aleksandrovich; Barzakovskiy, Valentin Pavlovich;  
Larin, Vladimir Vasili'yevich; Kurtseva, Nina Nikolayevna

Diagrams of silicate compounds; a handbook. no. 1: Binary systems  
(Diagrammy sostoyaniya silikatnykh sistem; spravochnik. vyp. 1:  
Dvoynyye sistemy. Moscow, Izd-vo "Nauka", 65. 0545 p. illus.,  
biblio., index. (At head of title: Akademiya nauk SSSR. Insti-  
tut khimii silikatov im. I. V. Grebenshchikova) Errata slip  
inserted. 4,200 copies printed.

TOPIC TAGS: phase diagram, oxide system, rare earth oxide, silicate,  
binary oxide system, ~~rare earth oxide~~, inorganic oxide, binary alloy

PURPOSE AND COVERAGE: This handbook is intended for industrial  
specialists, design-shop employees, and research organizations  
connected with the manufacture and use of materials based on oxides.  
The present volume contains data on binary silicate and other oxide  
systems which are essential in the manufacture of ceramics, re-  
fractories, electrical-engineering materials, structural and other  
materials. The text includes phase diagrams, stability regions of  
phases or individual compounds, and numerous tables. Each chapter  
is provided with references.

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ACC NR: AM6004712

TABLE OF CONTENTS [abridged]:

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SUB CODE: 11,07/ SUBM DATE: 15Sep65/ ORIG REF: 398/ OTH REF: 831/

Card 2/2

L 06118-67 EWP(e)/EMT(m) WH  
ACC NR: AP6030771 (A)

SOURCE CODE: UR/0363/66/002/009/1617/1620

AUTHOR: Degen, M. G.; Toropov, N. A.

36  
B

ORG: Institute of the Chemistry of Silicates im. I. V. Grebenshchiko, Academy of Sciences SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Kinetics of spherulite growth in silicate glasses<sup>b</sup>

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1617-1620

TOPIC TAGS: silicate glass, glass property, crystallography, structure analysis

ABSTRACT: The study of the kinetics of spherulite formation was carried out in connection with the study of the formation of spherulite structure in glasses. The change in the radius of a spherulite in time was investigated at a fixed crystallization temperature and a graph was constructed for the rate of growth of spherulites as a function of crystallization temperature. Investigations were carried out with spherulites formed in glasses of the following composition: Li<sub>2</sub>O--1.25%, Na<sub>2</sub>O--10.05%, MgO--17.95%; Al<sub>2</sub>O<sub>3</sub>--8.99%, SiO<sub>2</sub>--61.76% and Li<sub>2</sub>O--19.76%, SiO<sub>2</sub>--80.24%. For each composition of glass, a series of specimens crystallized at the same temperature but with different holding time were made. Each glass specimen was tempered in air after heat treatment. A polished face of the crystallized specimen was etched in 10% acid in order to develop the structure. The radii of spherulites were measured with a MBI-6

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UDC: 666.1 : 542.65

L 0010-07

ACC NR: AP6030771

microscope with 100 × magnification by means of an ocular micrometer. At least three measurements were made for each spherulite. It was determined that the growth of spherulites under isothermal conditions proceeds with constant radial velocity. In the initial moments of the crystallization process, inhomogeneity regions developed in the glass are observed under an electron microscope in the form of drop-like particles. The composition of these regions is apparently close to the composition of the future crystalline phase. The growth of spherulites proceeds by the addition of structural elements of the structural material of crystal and rejection of impurity elements. It is believed that the growth of spherulites is not determined by the addition of individual ions or atoms, but by their complexes. Orig. art. has: 2 tables, 4 figures.

SUB CODE: 07,11/ SUBM DATE: 28Dec65/ ORIG REF: 002/ OTH REF: 008

Card 2/2 *pla*

L 06119-67 EWP(e)/EWT(m) WH  
ACC NR: AP6030772

(A)

SOURCE CODE: UR/0363/66/002/009/1621/1625

39

38

B

AUTHOR: Degen, M. G.; Toropov, N. A.

ORG: Institute of Chemistry of Silicates im. I. V. Grebenshchikov, Academy of Sciences (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Electron-microscopic investigation of spherulite formation in silicate glasses

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1621-1625

TOPIC TAGS: silicate glass, glass property, crystallography, structure analysis, electron microscopy, spherulite

ABSTRACT: The article describes the formation of spherulites as observed in four different silicate glasses of nonstoichiometric compositions. After heat treatment, specimens were studied by means of an EM-5 electron microscope at 20,000-40,000  $\times$  magnification. Coarse-structured specimens were studied by means of an MBI-6 optical microscope at 400-800  $\times$  magnification. The study of the formation of spherulites was conducted by freezing the crystallization process at some definite stage. Glass specimens were heated at 600, 700, 800, 900, 1000 and 1100°C for periods ranging from several min to 4 hr. Each specimen was heated only once by placing it into a furnace pre-heated to the desired temperature and upon expiration of the desired exposure time, it was air quenched. It was found that the spherulite formation process is preceded by

UDC: 666.1 : 542.65 : 001.5

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L 06119-67

ACC NR: AP6030772

the formation of 0.05-0.07  $\mu$  particles or needle-like crystals 1-2  $\mu$  in size. The formation of spherulites in the investigated silicate glasses is similar to the formation of spherulites in polymers and minerals. The formation of spherulites takes place by the following three mechanisms: 1) from the concentration of active centers or microcrystals produced in the initial stage of the crystallization process by the geometric selection process; 2) during growth of disoriented crystallization centers on particles of some substratum; and 3) by the splitting of single crystals. Orig. art. has: 4 figures.

SUB CODE: 20 11

SUBM DATE: 28Dec65/ ORIG REF: 007/ OTH REF: 003

Card 2/2 *pla*

A-3614-67

ACC NR: AP6029825

(A)

SOURCE CODE: UR/0363/66/002/008/1487/1491

AUTHOR: Toropov, N. A.; Sher, Ye. S.; Boykova, A. I.

*JL  
B*

ORG: Institute of Silicate Chemistry im. I. V. Gribenshchikov, Academy of Sciences,  
SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Study of the products of thermal treatment of muscovite

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1487.  
1491

TOPIC TAGS: mica, thermal decomposition

ABSTRACT: Samples of ground muscovite were fired at 600-1400°C at 50° intervals for 3 hr at each temperature and the products formed were analyzed by optical examination, x-ray diffraction, differential thermal analysis, and infrared spectroscopy. The first structural changes were observed at 700°C. Thermal treatment at 1000°C was associated with the breakdown of the structure and with amorphization. The formation of new crystalline phases occurred at temperatures above 1000°C. The following compounds were identified by x-ray diffraction:  $\gamma\text{-Al}_2\text{O}_3$ , spinel  $\text{MgAl}_2\text{O}_4$ , sanidine,  $\text{K}_2\text{O}\cdot\text{Al}_2\text{O}_3\cdot 6\text{SiO}_2$ ,  $\alpha\text{-Al}_2\text{O}_3$  (corundum). On the basis of the infrared spectra of muscovite samples subjected to different temperatures, a quantitative description of the decomposition process of mica is proposed (see Fig. 1). Authors are grateful to G. P. Stavitskaya, who took the IR spectra. Orig. art. gas: 6 figures and 1 table.

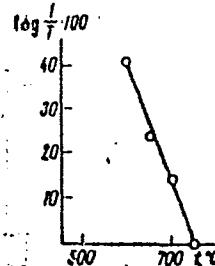
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Fig. 1. Dependence of  $\log \frac{1}{T}$  on the temperature of thermal treatment of muscovite sample.



SUB CODE: 07/ SUBM DATE: 09Dec65/ ORIG REF: 003/ OTH REF: 004

Card 2/2 - awm

L 32167-66 EWT(m)/T/EWP(e)/EWP(t)/ETI WP(c) WH/JD

ACC NR: AP6011323

(A)

SOURCE CODE: UR/0363/66/002/003/0524/0528

AUTHOR: Toropov, N. A.; Zhukauskas, R.-S. M.; Aleynikov, F. K.

ORG: Institute of Chemistry and Chemical Technology, Academy of Sciences, LitSSR  
(Institut khimii i khimicheskoy tekhnologii Akademii nauk LitSSR)

TITLE: Formation and recrystallization of quartzitic phases during crystallization  
of the  $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-MgO}$  system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 3, 1966, 524-528

TOPIC TAGS: glass, silicon dioxide, silica, alumina, ~~magnesia~~ magnesium oxide,  
crystallization, heat effect, quartz crystal, thermal stability, titanium dioxide

ABSTRACT: The effect of temperature on formation and recrystallization of quartz-  
like phases during the crystallization of K-1 to K-9 glasses, with various silica and  
titanium dioxide contents was studied. The individual oxide component in glass sam-  
ples was (in wt %) 27.69 to 42.02 for  $\text{Al}_2\text{O}_3$ , from 10.96 to 16.63 for  $\text{MgO}$ , 41.35 to  
61.35 for  $\text{SiO}_2$ , and from 0 to 15.0 for  $\text{TiO}_2$ . The glass samples (K-1 to K-9) of  
various compositions were prepared by fusing mixtures of oxides in platinum cruci-  
bles at 1550°C for 4 hrs. The glass samples were subjected to thermal differential

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L 32167-66

ACC NR: AP6011323

and x-ray analysis. It was found that an increase in SiO<sub>2</sub> content in glass leads to increased thermal stability of the quartzlike phase. Low SiO<sub>2</sub> content is reflected in low content of the quartzlike phases. No quartzlike phase could be detected by x-ray analysis for glasses containing 41.35 wt % SiO<sub>2</sub>. Introduction of TiO<sub>2</sub> to glasses resulted in greater contents of quartzlike phases and in an extension of the lower limit of these phases to 800-850°C (while for TiO<sub>2</sub>-free glasses this lower limit was equal to 1000°C). Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11,07/ SUBM DATE: 11Jun65/ ORIG REF: 003/ OTH REF: 009

Card 2/2 (b)

L 23298-66 EWP(e)/EWT(m)/EWP(j)/T/ETC(n)-o WH/RM/WH

ACC NR: AP6013352

(A)

SOURCE CODE: UR/0363/66/002/004/0738/0740

40

39

B

AUTHOR: Toropov, N. A.; Sirazhiddinov, N. A.

ORG: Institute of the Chemistry of Silicates im. I. V. Gribenshchikov, Academy of Sciences SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Dependence of microhardness of pyroceramic materials on morphology of crystalline phases in the spinel-silica system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 738-740

TOPIC TAGS: pyroceram, sitall, high strength material, glass crystallization, aluminosilicate glass, crystal structure

ABSTRACT: A microphotographic study has been made of the crystal phases formed at different crystallization (annealing) temperatures in magnesium aluminosilicate glasses of different composition to ascertain the effect of morphology of crystal phases on the strength of pyroceramic materials. Earlier, this effect was not studied experimentally and its role in the strength of pyrocerams was considered negligible in a theoretical study. Glass formulations were selected on the basis of their homogeneity and fine crystalline structure. Microphotographs of the same glass annealed at different temperatures showed differences in the size, form, and orientation of the primary dendritic spinel crystals and in the appearance of the secondary quartz-like and cordierite phases. A clear correlation was shown between

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UDC: 666.1:542.65

2

L 23298-66

ACC NR: AP6013352

microhardness, as a measure of strength of crystallized glass, and morphology of the crystals. Tabulated data showed that the highest microhardness ( $1400 \text{ kg/mm}^2$ ) was in the pyroceram sample with the finest dendritic spinel crystal structure and interdendritic distribution of cordierite crystals. The increase in strength was due to the dendritic structure, which was the most favorable for formation of strong intercrystalline bonds and for a minimum of crystal defects. The conclusion was made that the morphology of the crystals is one of the main factors of development of high-strength pyroceramic materials. Orig. art. has: 2 figures and 1 table. [JK]

SUB CODE: 11/ SUBM DATE: 28May65/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 4236

Card 2/2 ✓

MIKHAI'CHENKO, G.A.; MISUREV, Yu.A.; TOROPOV, N.A.; USALOV, Yu.P.

Topography<sup>1</sup> of the luminosity apparent in the mechanical de-excitation  
of  $\beta$ -irradiated alkali halide crystal phosphors. Opt. i spektr. 18  
no.6:1072-1073 Je '65. (MIRA 18:12)

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CIA-RDP86-00513R001756330006-0

TOROPOV, N.A.; AVGUSTINIK, A.I.; KUKOLEV, G.V.; MCCHEDLOV-PETROSYAN,O.P.

Petr Petrovich Budnikov, 1885-. Zhur. prikl.khim. 38 no.10:  
2153-2156 0 '65. (MIRA 18:13)

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CIA-RDP86-00513R001756330006-0"

TOROPOV, N.A.; BABAYAN, S.A.

Synthesis and study of the properties of nickel and cobalt  
orthosilicates. Zhur.neorg.khim. 11 no.1:28-32 Ja '66.  
(MIRA 19:1)

1. Institut khimii silikatov imeni I.V.Grebenshchikova.  
Submitted December 10, 1964.

TOROPOV, N.A.; TIGONEN, G.V.

Crystallization of glasses of the system  $\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 - \text{CaO} \cdot \text{SiO}_2$  in the subeutectic region. Izv. AN SSSR. Neorg. mat. 1 no.5:763-768 My '65.

Linear rate of growth of anorthite crystals in glass at 1000°C.  
(MIRA 18:10)  
Ibid.:775-779

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.



TOROPOV, N.A.; TIGONEN, G.V.

Effect of the primary thermal treatment on the kinetics of  
crystallization of anorthite-woolastonite glasses containing  
chromium oxide additions. Izv. AN SSSR, Neorg. mat., 1  
no.11:2014-2109 N '65. (MIRA 18:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.  
Submitted May 27, 1965.

I 11880-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG

ACC NR: AT6002241

SOURCE CODE: UR/2564/65/006/000/0111/0115

AUTHOR: Bondar', I. A.; Koroleva, L. N.; Toropov, N. A.

73  
QH

ORG: none

TITLE: Growing of rare earth silicate single crystals of oxyortho- and diortho-type from a solution-melt

SOURCE: AN SSSR, Institut kristallografi. Rost kristallov, v. 6, 1965, 111-115

TOPIC TAGS: single crystal growing, silicate, lanthanum compound, samarium compound, yttrium compound, ytterbium compound, scandium compound

ABSTRACT: Oxyortho ( $\text{Ln}_2\text{O}[\text{SiO}_4]$ ) and diorthosilicates ( $\text{Ln}_2\text{Si}_2\text{O}_7$ ) of lanthanum, samarium, ytterbium, yttrium, and scandium were prepared in single crystal form by growing from a solution-melt. Potassium fluoride was chosen as the solvent and mineralizer. Coprecipitation with  $\text{NH}_4\text{OH}$  was used to achieve an intimate mixture of silica and rare earth oxide. The mixture was then heated in a crucible to 1300 — 1320°C for 8 hr, kept at this temperature for 4 — 6 hr, then slowly cooled from 1320 to 850°C. The experiment lasted 300 hr. La, Sm, Yb, Y, Sc oxyorthosilicate and Yb diorthosilicate crystals measuring 4 x 3 x 2 mm and less were obtained. Their quality was checked by x-ray phase analysis, microscopic analysis, and infrared spectroscopy, and the corresponding data are tabulated. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: none

QC  
Card 1/1

TOROPOV, N.A.; UDALOV, Yu.P.

Dislocations and their effect on the properties of high-melting  
oxides. Zhur. VKHO 10 no.5:497-506 '65.  
(MIRA 18:11)

1. Chlen-korrespondent AN SSSR (for Toropov).

GRUBENSHCHIKOV, R.G.; TOROPOV, N.A.; SHITOVA, V.I.

Crystal chemical analogy of germanates with titanates, silicates, and  
fluoberrylates, and the system barium oxide - germanium dioxide.  
Izv. AN SSSR. Neorg. mat. I no.7:1130-1142 Jl '65. (MIRA 18:9)

1. Institut khimii silikatov imeni I.V.Grebenshchikova AN SSSR.

TOROFOV, N. I.; BRYANTSEV, B.A.

Effect of aluminum oxide on the physicochemical properties of iron-magnesium silicate melts. Izv. AN SSSR. Neorg. mat. 1 no.74 1965-1966  
Jl '65. (NICA 13:9)

1. Institut khirli silitkabov imeni I.V. Gribenochikova AN SSSR.

BORISENKO, A.I., doktor tekhn. nauk, otv. red.; TOROPOV, N.A., red.; IVANOV, V.Ye., red.; APPEN, A.A., doktor khim. nauk, red.; GOREBUNOV, N.S., doktor khim. nauk, red.; KLEVTSUR, S.A., doktor tekhn. nauk, red.; NECHIPORENKO, Ye.P., doktor tekhn. nauk, red.

[Heat-resistant coatings; transactions] Zharostoikie pokrytiia; trudy. Leningrad, Nauka, 1965. 233 p.  
(MIRA 18:9)

1. Seminar po zharostoykim pokrytiyam, Leningrad, 1964.
2. Chlen-korrespondent AN SSSR (for Toropov, Ivanov).

TIKHONOV, V.A., prof.; GALABUTSKAYA, Yo.A.; POLUEKTOVA, Ye.F.;  
KUDRYAVTSEV, T.N.; SUVOROVA, O.F.; TOROPOV, N.A., red.;  
KVITKO, I.S., red.

[Laboratory manual on the chemistry of silicon and the physical  
chemistry of silicates] Praktikum po khimii kremniia i fizicheskoi  
khimii silikatov. L'vov, Izd-vo L'vovskogo univ., 1965. 291 p.  
(MIRA 18:9)

1. Chlen-korrespondent AN SSSR (for Toropov).

TOROPOV, N.A.; RUMYANTSEV, P.F.

Factors controlling the rate of formation of Portland cement  
clinker. Zhur.prikl.khim. 38 no.3:660-662 Mr '65.

(MIRA 18:11)

1. Submitted July 31, 1963.

TOROPOV, N.A.; RUMYANTSEV, P.F.

Method of studying the dissolution kinetics of clinker minerals  
in the liquid phase of Portland cement clinker. Zhur. prikl.  
khim. 38 no.5:1129-1131 My '65. (MIRA 18:11)

1. Institut khimii silikatov imeni I.V. Gredenshchikova AN SSSR.

TOROFOV, N.A.; DORROVOVSKIY, K.A.

Effect of sodium and potassium oxides on the mineralogical  
composition of portland cement clinker. Izv. AN SSSR. Nauka.  
mat. 1 no.5:769~774 My '65. (M.PA 12:10)

I. Institut khimii silikatov imeni Gerasimchikova AN SSSR.

TOROPOV, N.A.; RUMYANTSEV, P.F.

Kinetics of silica dissolution in the liquid phase of a cement  
clinker. Zhur.prikl.khim. 38 no.9:2113-2114 S '65.

Analysis and generalization of the data obtained in the study  
of dissolution kinetics of clinker minerals in the liquid  
phase of cement clinkers. Ibid.:2115-2116

(MIRA 18:11)

1. Institut khimii silikatov imeni Grebenshchikova AN SSSR.

SYCHEV, M.M.; KORNEYEV, V.I.; FEDOROV, N.F.; TOROPOV, N.A.  
doktor tekhn. nauk prof., red.; BUKINA, N.N., red.

[Alite and belite in portland cement clinker and the  
processes of alloyage] Alit i belit v portlandsementnom  
klinkere i protsessy legirovaniia. Pod red. N.A.Toropova.  
Leningrad, Stroizdat, 1965. 152 p. (MIRA 18:12)

1. Chlen-korrespondent AN SSSR (for Toropov).

PORAY-KOSHITS, Ye.A., otv. red.; YEVSTROP'YEV, K.S., red.;  
KONDRAT'YEV, Yu.N., red.; LEBEDEV, A.A., red.; MAZURIN,  
O.V., red.; MOLCHANOV, V.S., red.; PETROVSKIY, G.T.,  
red.; POZUBENKOV, A.F., red.; TOROPOV, N.A., red.;  
CHEBOTAREVA, T.Ye., red.; YAKHKIND, A.K., red.

[Vitreous state; transactions] Stekloobraznoe sostoianie;  
trudy. Moskva, Nauka, 1965. 439 p. (MIRA 18:7)

1. Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu.  
4th, Leningrad, 1964.

TOROPOV, Nikita Aleksandrovich; BARZAKOVSKIY, Valentin Pavlovich;  
LAFIN, Vladimir Vasil'yevich; KURTSEVA, Nina Nikolayevna

[Constitutional diagrams of silicate systems; a handbook]  
Diagrammy sostoianiiia silikatnykh sistem; spravochnik. Mo-  
skva, Nauka. No.1. 1965. 545 p. (MIRA 18:10)

1. Chlen-korrespondent AN SSSR (for Toropov).

L 00393-66 EWP(e)/EWT(m)/EPF(c)/ EWP(i)/EWP(t)/EWP(b) IJP(c) JD/GS/MH  
ACCESSION NR. AT5013397 UR/0000/65/000/000/0193/0201

AUTHOR: Toropov, N. A., Sirazhiddinov, N. A.

22

B+1

TITLE: Vitrification and crystallization in the system magnesium oxide - alumina  
silica 27 27 21

SOURCE: AN SSSR. Institut khimii silikatov. Strukturnyye prevrashcheniya v  
steklakh pri povyshennykh temperaturakh (Structural transformations in glass at high  
temperatures). Moscow, Izd-vo Nauka, 1965, 193-201

TOPIC TAGS: glass crystallization, vitrification, spinel, cordierite

15

ABSTRACT: The authors studied the regions of vitrification and sequence and character of crystallization in samples of the spinel-silica system and several samples, the composition of which were located in the ternary field of primary crystallization of the magnesia-alumina spinel. Particular attention was given to the identification of metastable phases formed first which are chiefly responsible for the structure and properties of glass-crystalline products. X-ray diffraction and optical analysis were used to identify the crystallization products, and the change in the microstructure of these crystalline phases as a function of temperature and composition was studied. In samples containing

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ACCESSION NR: A15013397

less than 35% SiO<sub>2</sub>, the primary crystallization product is spinel; in samples containing over 35% SiO<sub>2</sub>, the products are metastable solid solutions with a quartz structure which decompose above 1000C. In the pseudobinary system spinel-cordierite, the polymorphic transformation of cordierite occurs above 1000C, at temperatures which vary over a certain range depending upon the composition. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 21Dec64

ENCL: 00

SUB CODE: MT

NO REF SOV: 005

OTHER: 001

KC  
2/2

Card

TOROPOV, N.A.; BONDAR', I.A.; SIBORENKO, G.A.; KOP'EVSKA, L.N.

Synthesis of rare-earth silicates and certain problems involved  
in the classification of naturally occurring minerals of thalenites  
and yttrialites. Izv. AN SSSR. Neorg. mat. 1 no.2:118-221 F '65.  
(MIRA 18:7)

I. Institut khimii silikatov AN SSSR.

L 2819-66 EWT(1)/EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG  
ACCESSION NR: AP5016181

UR/0051/65/018/006/1072/1073  
535.373.1

AUTHORS: Mikhalechenko, G. A.; Misurev, Yu. A.; Toropov, N. A.;  
Udalov, Yu. P.

TITLE: On the topography of radiation under mechanical de-excitation  
of alkali-halide crystal phosphors preirradiated by beta rays

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 1072-1073

TOPIC TAGS: crystal dislocation, crystal dislocation phenomenon,  
crystal optic property, luminescent crystal, luminescence, beta  
bombardment

ABSTRACT: The authors checked the shape of the light pulse produced  
when a single crystal CsI (grown by the Stockbarger method and doped  
with 0.005 wt. per cent InI) is exposed to beta radiation and then  
mechanically de-excited by pricking. The form of the light pulse was  
observed visually under a magnifier and also photographed. The shape  
of the produced impact rosette confirmed the hypothesis that the pro-

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L 2819-66

ACCESSION NR: AP5016181

duced moving edge dislocations play the principal role in the mechanical de-excitation of the crystal, since the shape of the rosette corresponded to the picture of motion of edge dislocations crossing the investigated plane. A similar phenomenon was observed also in NaCl-Eu, KBr-Eu, and KI-In crystals, but the luminescence intensity was lower. The authors thank E. M. Nadgornyy for interest in the work and for valuable critical remarks. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 13Feb64

ENCL: 00

SUB CODE: SS, OP

NR REF SOV: 002

OTHER: 000

PC  
Card 2/2

L 1156-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(a) JD/JQ

ACCESSION NR: AP5022265

UR/0363/65/001/007/1130/1142  
546.431+546.289

4/1  
40  
B

AUTHOR: Grebenschchikov, R. G.; Toropov, N. A.; Shitova, V. I.

TITLE: Some aspects of the analogy between the crystal chemistry of germanates and titanates, silicates, and fluoberyllates, and the system barium oxide-germanium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965,  
1130-1142

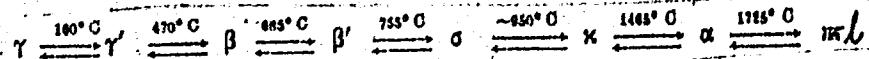
TOPIC TAGS: germanium compound, barium oxide, barium compound, fluorine compound,  
beryllium compound, rubidium compound, lead oxide, titanium oxide, silicate,  
barium titanate

ABSTRACT: In a study of the phase diagram of the system BaO-GeO<sub>2</sub>, use was made of thermal, x-ray diffraction, microscopic, and crystal optical analyses. The system is found to have six chemical compounds with BaO:GeO<sub>2</sub> ratios equal to 3:1, 2:1, 3:2, 1:1, 1:4, and 1:19; three of these compounds were obtained for the first time: Ba<sub>3</sub>GeO<sub>5</sub>, Ba<sub>3</sub>Ge<sub>2</sub>O<sub>7</sub>, and BaGe<sub>19</sub>O<sub>39</sub>. An approximate scheme of the polymorphism of tribarium germanate is proposed:

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L 1456-66

ACCESSION NR: AP5022265



The interplanar distances and refractive indexes of all the germanates studied and their polymorphous modifications are tabulated. A discussion of the crystal chemical analogy of barium germanates with fluoberyllates, silicates, titanoo-silicates, and titanates is given in which the systems  $\text{RbF-BeF}_2$ ,  $\text{PbO-SiO}_2$ ,  $\text{PbO-GeO}_2$ ,  $\text{BaO-SiO}_2$ ,  $\text{BaO-GeO}_2$ , and  $\text{BaO-TiO}_2$  are compared. Orig. art. has: 6 figures and 5 tables.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 29Mar65

ENCL: 00

SUB CODE: IC, SS

NO REF SOV: 007

OTHER: 013

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

those with divalent cations. X-ray diffraction patterns of the oxyorthosilicates.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TITLE: Mechanism of formation of cordierite from agalmatolite and magnesium oxide  
in the solid state

Author: [redacted] Date: [redacted] File No.: [redacted]

analysis made it possible to interpret the mechanism of dissociation of agalmatolite and the reaction of formation of cordierite in the solid state. The follow-

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

L 52066-65

ACCESSION NR: AP5014087

2

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

L 587C8-65

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TOROPOV, N.A.; UDALOV, Yu.P.

Kinetics of the formation of etching pits on dislocations in KBr  
crystals. Dokl. AN SSSR 161 no.2:340-342 Mr '65.  
(MIRA 18:4)

1. Institut metallurgii im. A.A.Bajkova. 2. Chlen-korrespondent  
AN SSSR (for Toropov).

TOROFOV, N. K.

Uslovnye refleksy s glaza pri udalenii zatylochnykh dolei bol'sikh polusharii u sobaki [Conditioned reflexes from the eye upon removal of occipital lobes of the cerebral hemispheres in dogs]. Moskva, 1952. 91 p. (Akad. med. nauk SSSR. Dissertatsiia shkoly ada. I. P. Pavlova).

SO: Monthly List of Russian Accessions, Vol. 7, No. 3, June 1954.

GREBENSHCHIKOV, R.G.; TROPOV, N.A.; SHITOVA, V.I.

Solid solutions of  $Ba_2SiO_4$  -  $Ba_2GeO_4$ . Izv. AN SSSR. Neorg. mat. 1  
no.1:121-125 Ja '65. (CIRA 13:5)

1. Institut khimii sivikatov imeni Grebenchikova AM SSSR.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

Card 214

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TOROPOV, N.A.; DOBROVOL'SKIY, K.A., inzh.

Effect of sodium and potassium metal salts on the formation of  
the minerals of clinkers. TSement 31 no.1:6-7 Ja-F '65.

(MIRA 18:4)

1. Institut khimii silikatov AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Toropov).

TOROPOV, N.A.; FEDOROV, N.F.

Study of the phase diagram of the system calcium orthosilicate-neodymium orthosilicate and calcium orthosilicate-lanthanum orthosilicate. Izv. AN SSSR. Neorg. mat. 1 no.1:126-130 Ja '65. (MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

TOROPOV, N.A.; FEDOROV, N.F.

Phase diagram of the system  $\text{Ca}_2\text{SiO}_4 - \text{Y}_4(\text{SiO}_4)_3$ . Zhur. neorg. khim. 10 no.3:666-668 Mr '65.  
(MIRA 18:7)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

TOROPOV, N.A.; RUMYANTSEV, P.V.

Kinetics of dissolution of calcium oxide in the liquid phase of a  
cement clinker. Zhur. prikl. khim. 38 no.7:1614-1616 Jl '65.  
(MIRA 18:7)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

L 05285-67 EWT(d)/EWP(1) IJP(c) BB/GG/GD  
ACC NRT AT6022674 SOURCE CODE: UR/0000/66/000/000/0067/0072

AUTHOR: Zakrevskiy, A. D.; Toropov, N. R.

46

B+1

ORG: none

TITLE: Teaching pattern recognition <sup>160</sup> in Boolean space

SOURCE: Moscow, Institut avtomatiki i telemekhaniki, Samoobuchayushchiyesya avtomati-  
cheskiye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 67-72

TOPIC TAGS: pattern recognition, Boolean space, automatic machine teaching, algorithm

ABSTRACT: As one of the ways of solving the problem of pattern recognition and teaching of pattern recognition deserving of attention, the authors investigate appropriate models in Boolean space. The following is assumed as a working hypothesis: the pattern is a Boolean function having a sufficiently simple disjunctive form, i.e., with a small number of low-rank conjunctions. In this case it becomes possible to teach pattern recognition on the basis of relatively short teaching sequences, the length of which is appreciably less than the power of the set. Under these conditions effective algorithms of teaching pattern recognition are constructed on the basis of methods of minimizing weakly determined Boolean functions. For example, the use of the following principle is reasonable: for a given teaching sequence of

Card 1/2

L 05285-67

ACC NR: AT6022674

fixed length it is assumed that the pattern corresponds to a Boolean function having the simplest disjunctive form (minimal or briefest) and taking from the elements of the teaching sequence the values prescribed by this sequence. By increasing the fixed length and forming a corresponding sequence of Boolean functions it is possible to expect that with a sufficiently simple pattern this sequence will converge at a certain limit corresponding to the pattern sought.  
Orig. art. has: 5 figures.

SUB CODE: 05, <sup>09/</sup> SUBM DATE: 02Mar66/ ORIG REF: 003/ OTH REF: 002

Card 2/2 *lcg/r*

L 04423-67 EWT(d)/EWP(1) IJP(c) BB/GG/GD  
ACC NR: AT6014295 SOURCE CODE: UR/0000/65/000/000/0357/0362

AUTHOR: Kashirov, V. I. (SSSR); Butakov, Ye. A. (SSSR); Pottosin, Yu. V.  
(SSSR); Toropov, N. R. (SSSR); Tsvetnitskaya, S. A. (SSSR)

51

B+1

ORG: none

TITLE: Problems in materialization of the L-machine 160

SOURCE: International Symposium on the Theory of Relay Systems and Finite Automata. Moscow, 1962. Sintez releynykh struktur (Synthesis of relay structures); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 357-362

TOPIC TAGS: logic circuit, logic design, switching theory, digital computer

ABSTRACT: Structures of a cell of multioutput fields of the "L-machine" (see AT6014294), a combination generator, and a Gray-code counter of the machine's control unit are considered. The counter has ten binary elements whose states can be represented by a binary word  $g = (g_0, g_1, \dots, g_9)$ . A 10-digit binary word  $r$  determines the set of blocked digits in the word  $g$ , i.e., with  $r_i = 0$ ,

Card 1/2

L 04423-67

ACC NR: AT6014295

$g_1 = 0$ . The generator of combinations of 10 things  $k$  at a time comprises 10 binary elements whose states can be described by a 10-digit binary word  $c = (c_{10}, c_9, \dots, c_1)$ . Under the influence of control pulses at the generator input, the word  $c$  will consecutively take on all values that correspond to all possible combinations of  $k$  ones and  $10-k$  zeros. The field unit comprises one principal and 13 auxiliary fields. Each field comprises  $2^{10} = 1024$  elements with numbers  $j$ , where  $j = 0, 1, \dots, 1023$ . Block diagrams of the above units are shown, and their operations are briefly described. Orig. art. has: 4 figures, 13 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 27Aug65 / ORIG REF: 001

awm

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

TOROPOV, S.  
M. N. DUBININ, ZhPKh, 1932, 5, 413-424

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

TOROPOV, S.  
M. M. DUBININ, ZhPKh, 5, 413-24(1932)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TOROPOV, Sergey Aleksandrovich

TOROPOV, Sergey Aleksandrovich.....Moskva, Sia proshloe i nastroiashches. ("Ost'va),  
1896. 1 p. l., ;1, 123 p.

DLC: DK601.T

SO: LC, Soviet Geography, Part II, 1951/Unclassified

TOROPOV, Sergey Aleksandrovich

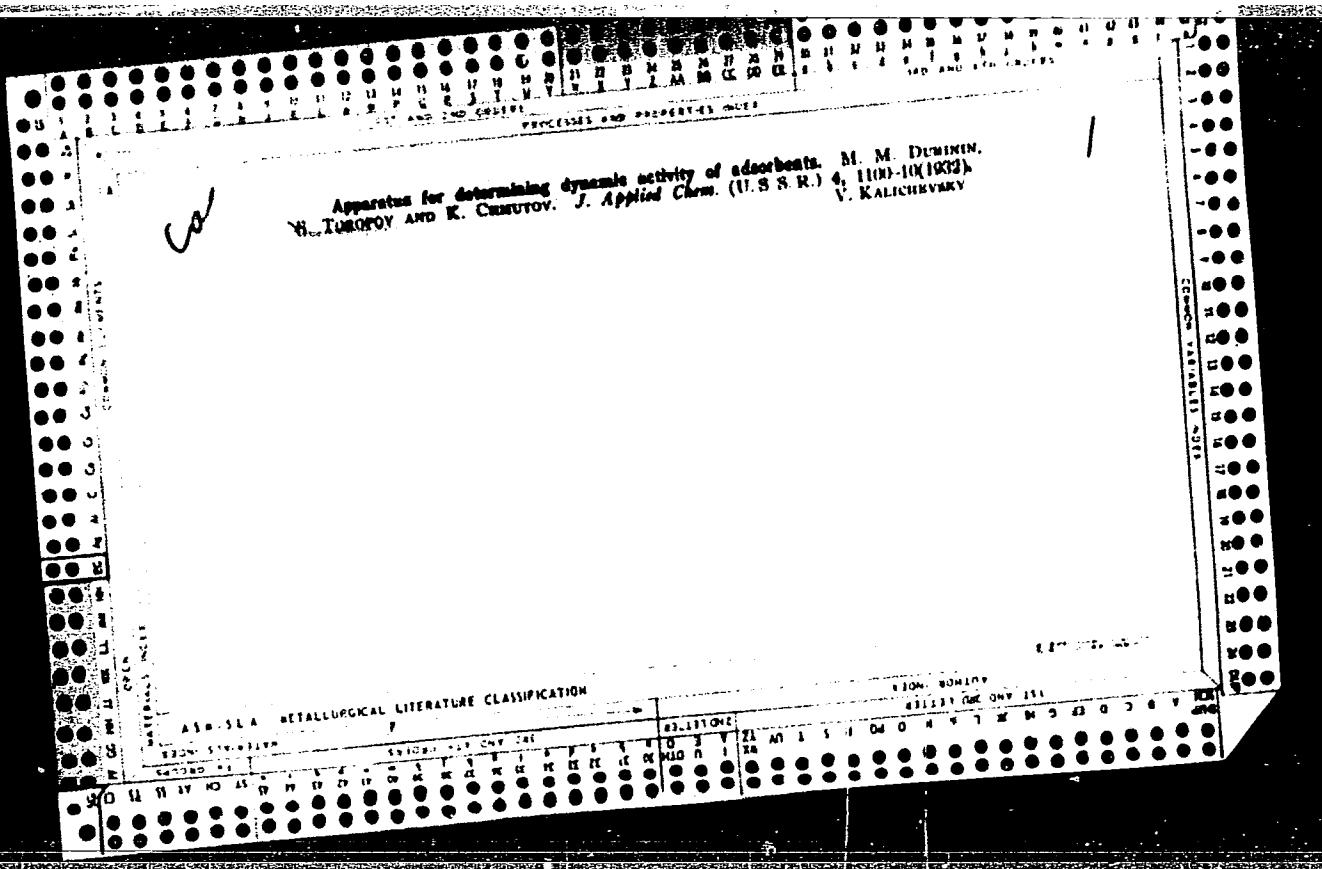
TOROPOV, Sergey Aleksandrovich.....Podmoskovnye usad'by. Moskva, Izd-vo Akademii  
arkhitektury SSSR, 1947. 36 p. 30 plates. (Sokrovischa russkogo zodchestva).  
(Akademija arkitektury SSSR. Institut istorii i teorii arkitektury.)  
"Bibliografiia": p. 36-(37)

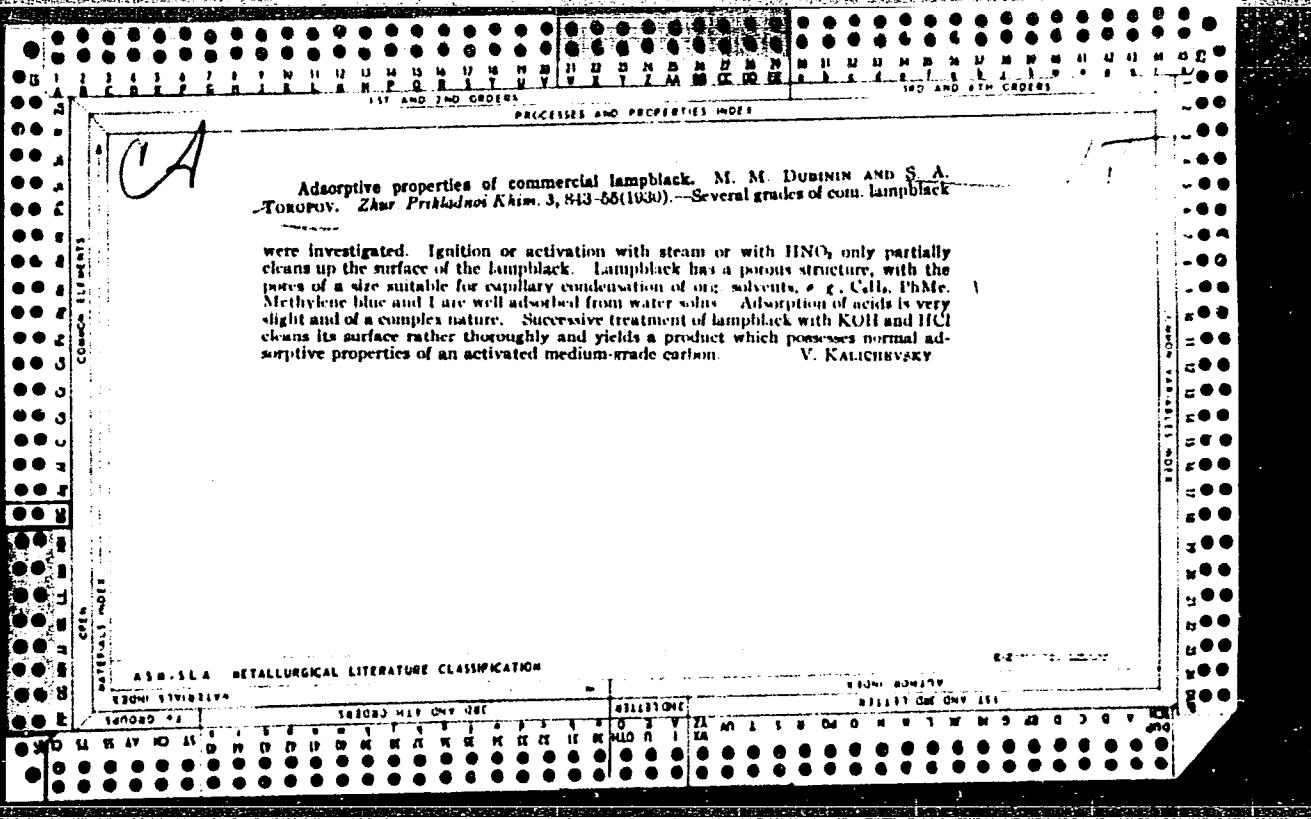
DLC: NA7369.M6T6

SO: LC, Soviet Geography, Part II, 1951/Unclassified

TOROPOV, S.A., professor, doktor arkhitektury.

Architectural monuments and methods for their restoration. Gor.khoz.Mosk.  
21 no.5:26-37 My '47. (MLRA 6:11)  
(Architecture--Conservation and restoration)





Toropov, S.A.

13

Restoration of industrial gas masks. S. A. Toropov  
Obrana Truda (U.S.S.R.) 1938, No. 1, 59-61; Akts.  
Referat. Zhur. 1, No. 10, 103 (1938). — Two figures and a  
description of the app. for the restoration of masks  
filled with activated charcoal are given. Vapors of org.  
substances are removed by blowing with superheated  
steam at 100-130° and drying with hot air at 110-120°.  
NH<sub>3</sub> is removed by blowing first with air at 140-150°,  
and then with moist air; CO by blowing with dry air  
until the initial wt. is restored. W. R. Henn

TOROPOV, S. A.

Repair of industrial gas masks Moskva, Gos. Nauchno-tekhn. izd-vo khim. lit-ry, 19<sup>45</sup>.  
21 p. (51-27943)

TP242.T6

1. Gas masks. 2. Gases, Asphyxiating and poisonous.

TOROPOV, S. A.

62/49T16

USSR/Chemistry - Adsorption  
Chemistry - Hydrogen Sulfide

Jun 49

"Research on the Adsorption Properties of  
Oxidized Carbon For Hydrogen Sulfide and  
Vapors of Benzene," S. A. Toropov, A. V.  
Fjlayer, 3. 1/2 pp

"Zhur Prik Khim" Vol XXII, No 6

Discovered that oxidized carbon derived from  
boiling carbon in a 10% solution of  $HNO_3$  for  
1-3 hours has the greatest adsorption qualities  
for hydrogen sulfide and vapors of benzene.  
Carbon which has first adsorbed its maximum of

62/49T16

USSR/Chemistry - Adsorption (Contd) Jun 49

hydrogen sulfide has increased adsorption  
properties with respect to benzene vapors.  
Submitted 15 Feb 48.

62/49T16

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

TOROPOV, S.A.

[Protection of the respiratory organs in the industrial plant]  
Zashchita organov dykhaniia na proizvodstve. Moskva, Profizdat,  
1954. 108 p. (MLRA 7:11D)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TOROPOV, S.A., kandidat tekhnicheskikh nauk.

Protection of respiratory organs against dust. Khim.prom.  
no.3:177-178 Ap-My '54. (MIRA 7:8)  
(Chemical industries--Safety measures) (Respirators)

TOROPOV, S.A.

Preparation of slides for dust preparations. Gig.i san. no.5:52  
My '54. (MIRA 7:5)

1. Iz Moskovskogo instituta okhrany truda Vsesoyuznogo tsentral'nogo  
soveta profsoyuzov. (Dust) (Laboratories--Apparatus and supply)

TOROPOV, S. A.

USSR/Chemistry - Protective devices

FD-522

Card 1/1 : Pub. 50-21/23

Author : Toropov, S. A.

Title : Protection of respiratory organs from gases and vapors

Periodical : Khim. prom., 311-312 (55-56), Jul/Aug 1954

Abstract : Describes standard types of USSR industrial gas masks and respirators, indicating markings, distinctive colors, etc.

Institution :

Submitted :

FD-974

USSR/Chemistry - Safety devices

Card 1/1              Pub. 50 - 17/19

Author        :        Toropov, S. A., Cand Tech Sci

Title         :        Protection of the eyes during work at chemical plants.

Periodical    :        Khim. prom., No 7, 440-441 (56-57), Oct-Nov 1954

Abstract      :        Lists the characteristics of 8 types of standard goggles and of a transparent protective shield used in the USSR chemical industry. One reference, USSR, after 1940. One table, one figure.

Institution :        Moscow Institute of Labor Protection, All-Union Central Council of Trade Unions

Toropov, S. A.  
USSR/Engineering - Safety equipment

Card 1/1 Pub. 128 - 22/32

Authors : Toropov, S. A.

Title : Protecting eyes during machine construction work

Periodical : Vest. mash. 11, 80-82, Nov 1954

Abstract : Tests were conducted on various types of industrial goggles in order to decrease their weight, eliminate glass sweating due to condensation and improve the overall visibility. Tables; illustrations.

Institution : ...

Submitted : ...

TOROPOV, S.A., kandidat tekhnicheskikh nauk.

Individual protection of workers during pneumatic painting of  
machines. Vest.mash.34 no.1:98 Ja '54. (MLRA 7:2)  
(Spray painting--Safety measures)

TOROPOV, S.A., kandidat tekhnicheskikh nauk.

"Methods for investigating smoke and dust pollution of air."  
A.I. Burshtein. Reviewed by S.A. Toropov. Zav.lab. 22 no.6:  
759-760 '56. (MIRA 9:8)  
(Aerosols) (Air--Pollution) (Burshtein, A.I.)

TOROPOV, S.A. : GOL'DINA, T.S.A.

Device for determining silicon dioxide by the thermal method.  
Zav. lab. 22 no. 9:1118-1120 '56. (MLRA 9:12)

1. Moskovskiy institut okhrany truda Vsesoyuznogo TSentral'nogo  
soveta professional'nykh soyuzov.  
(Silica) (Thermal analysis)

TOROPOV, S.A.; KHABAROV, P.G.

Individual protection against corrosive substances. Gig. truda i  
prof. zab. 4 no.6:61 Je '60. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda,  
Moskva.

(ACIDS--HANDLING AND TRANSPORTATION)

TOROPOV, S.A., kand. tekhn. nauk, red.; SHITAL', V.K., spets. red.; KUZNETSOVA, N.I., red.; SHIKIN, S.T., tekhn. red.

[ Physicochemical methods for analyzing the atmosphere] Fiziko-khimicheskie metody issledovaniia vozduzhnoi sredy; sbornik nauchno-issledovatel'skikh rabot. Pod red. S.A.Toropova. Moskva, Izd-vro VTS SPS Profizdat, 1961. 93 p. (MIRA 14:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda.

(Air--Analysis) (Eudiometer)

TOROPOV, S.A.; KHBABOV, P.G. (Moskva)

Individual methods for protection from dust. Gig. truda i prof.  
zab. 4 no. 7:62 Jl '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda.  
(DUST—PREVENTION) (RESPIRATORS)

GITSEVICH, G.A., inzh., konsul'tant; TOROPOV, S.A., kand.tekhn.nauk,  
konsul'tant; STOLPER, M.B., inzh., konsul'tant

Answers to the readers. Kislorod 11 no.6:41-43 '58. (MIRA 12:3)  
(Air--Analysis) (Insulating materials)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001756330006-0"

TOROPOV, Sergey Aleksandrovich; DENISOVA, I.S., red.; RAKOV, S.I., tekhn.red.

[Dust control in industry] Bor'ba s pyl'iu na proizvodstve.  
[Moskva] Izd-vo VTsSPS Profizdat, 1957. 49 p. (MIRA 10:12)  
(Dust--Removal)

TOROPOVA, G.P.  
TITLE  
PERIODICAL

TOROPOVA, G.P.,  
The Influence of X-Rays on the Nuclein-Exchange in the Liver.  
(Deystviye rentgenovskikh luchey na nukleinovyiy obmen v pecheni, Russian)  
Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 80-83, (U.S.S.R.)

## ABSTRACT

The present work investigates the quantity of nuclei in a tissue which contains nucleo-proteides and desoxyribonuclein acid (DNA) in the nuclei. Besides, the change of the chemical composition of the DNA of the pure nuclei of the liver tissue of mice (which were killed in different stages of radiation sickness) was investigated. The experimental animals, male mice of a weight of 170 g, were, as a whole, irradiated with the minimum lethal dosage (650 r) of filtered X-rays (0.5 mm Cu + 1 mm Al). The animals were killed 60 and 80 minutes, and 3 and 6 days after irradiation. The pure nuclei were separated from the liver tissue of the control animals as well as of the irradiated animals, and of them the dry preparations of the nucleo-proteides (nuclear albumins) were produced. The separation of the nuclei and the production of DNA from the nuclei are described. The following chapters discuss the influence of radiation energy on the content of the nuclei, nucleo-proteides and DNA in liver tissue as well as on the change of the chemical composition of DNA.

Summary of the results achieved: The ionizing radiation reduces the content of nuclei in liver tissue. This affection begins one hour after irradiation and lasts for the whole test period. The smallest quantity of nuclei was observed 3 hours after irradiation. The content of nucleo-proteides in tis-

Card 1/2

20-1-27-64

The Influence of X-Rays on the Nuclein-Exchange in the Liver. The tissue changes corresponding to the decrease of the quantity of nuclei. The content of DNA in the nuclei remains the same during the first hour after irradiation and decreases most (21%) three hours after that. Then a normalization occurs. This points in the direction of an unaffected condition of the ferment-systems in the remaining nuclei of the tissue of irradiated mice. Finally the basic mechanism of these phenomena is dealt with.

(With 3 illustrations)

ASSOCIATION Not Given.  
PRESENTED BY ORBELI L.A., Member of the Academy  
SUBMITTED 15.9.1956  
AVAILABLE Library of Congress.  
Card 2/2

TOROPOVA, T.G.

TOROPOVA, T.G.: Author's abstract of a dissertation on "A study of the conditions of formation of zinc ferrite and the possibilities for its decomposition", submitted toward the academic degree of Candidate of Technical Science. Moscow, 1955. Min Higher Education USSR. Moscow Inst of Nonferrous Metals and Gold imeni M.I. Kalinin, Chair of the Metallurgy of Heavy Metals. (Dissertations for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya letopis' No 45, 5 November 1955. Moscow.

S/169/62/000/003/049/098  
D228/D301

3,5150

AUTHOR: Toropova, T. P.

TITLE: The role of different factors in the weakening of light in the atmosphere (Theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 27, abstract 3B216 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 151-152)

TEXT: The author states the results of measuring the atmosphere's transparency in the region from 4100 to 10,100 Å, the spectroscopic determination of the water vapor content throughout the atmosphere, and the observation of circumsolar halos. These observations allowed absorption by ozone, molecular scattering, and the weakening governed by the amount of water-vapor present in the atmosphere to be deduced from the total weakening of light by the terrestrial atmosphere. / Abstracter's note: Complete translation. /

Card 1/1

S/169/62/000/003/050/098  
D228/D301

3,5150

AUTHOR: Toropova, T. P.

TITLE: Investigation of the dispersion indicatrices in the atmosphere's near-surface layer by a photoelectrical method (Theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 27, abstract 3B217 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 213-214) B

TEXT: A new photometer has been designed to investigate the scattering functions in the atmosphere's near-surface layer by means of a searchlight beam. The method of measuring the relative and the absolute indicatrices of dispersion is described. The results of observations for 1957 and 1958 are presented in the form of a table. Analysis of the results is given. On the basis of data about the absolute indicatrices of dispersion the optical thicknesses of the dispersion volume were determined for different days and com-

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Investigation of the ...

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pared with the optical thickness, calculated from the Rayleigh formula. The method of ascertaining the degree of polarization of scattered light is described, and the analysis of observations for 30 days is given. Abstracter's note: Complete translation.

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TOROPOVA, T. P.

USSR/Geophysics - Solar Halo

21 Aug 51

"Circumsolar Halo (Aureole) in Different Rays of the Spectrum," Ye. V. Pyaskovakaya-Fesenkova, Astrophys Inst, Acad Sci Kazakh SSR, Alma-Ata

"Dok Ak Nauk SSSR" Vol LXXIX, No 6, pp 957-960

Since 1949 co-workers T. P. Toropova and N. I. Ovchinnikova have been conducting measurements at the mountain observatory of the Astrophys Inst. Acad Sci Kazakh SSR in the vicinity of Alma-Ata (height 1,400 meters), on the illumination on an area perpendicular to the rays from the sun and from the halo around the sun. For this purpose the aureole photometer designed by V. G. Fesenkov with shutoff light filters was used. Gives graphs of results. Submitted by Acad V. G. Fesenkov 26 Jun 51.

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TOROPOVA, T. P.

PA 234T72

USSR/Geophysics - Water Vapor in the Atmosphere 1 Sep 52

"Spectroscopic Method for Determining the Quantity of Water Vapor in the Atmosphere," T. P. Toropova, Inst of Astrophys, Acad Sci Kazakh SSR, Alma-Ata

"Dok Ak Nauk SSSR" Vol 86, No 1, pp 59-61

Discusses use of spectrograms of part of the solar spectra obtained by photoelec method; dependence of ratio of radiational intensities on the atm mass in the direction of the sun

for various portions of the absorption band, and calibration curves. States that the entire vapor content of the whole atm has been detd. in the summer of 1951 in the expts at the mountain observatory of the Inst of Astrophys. Results indicated that dry aerosols play a big part in the attenuation of light.

Submitted by Acad V. G. Fesenkov 7 Jul 52.

234T72